Use MS Excel to complete the following tables. Attach the Excel spread sheets to this problem set.

1. The table below presents the cost and revenue data for Bruce’s Great Falls Select T-shirts. Bruce has an exclusive contract to produce and market GFS t-shirts.

   a. Fill in Bruce’s total revenue, marginal revenue, marginal cost, and profit schedules.

<table>
<thead>
<tr>
<th>Output (Shirts/day)</th>
<th>Price ($/shirt)</th>
<th>Total Revenue</th>
<th>Marginal Revenue</th>
<th>Total Cost</th>
<th>Marginal Cost</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>26.00</td>
<td>0.00</td>
<td>---</td>
<td>50.00</td>
<td>---</td>
<td>-50.00</td>
</tr>
<tr>
<td>1</td>
<td>25.00</td>
<td>25.00</td>
<td>25.00</td>
<td>60.00</td>
<td>10.00</td>
<td>-35.00</td>
</tr>
<tr>
<td>2</td>
<td>24.00</td>
<td>48.00</td>
<td>23.00</td>
<td>69.00</td>
<td>9.00</td>
<td>-21.00</td>
</tr>
<tr>
<td>3</td>
<td>23.00</td>
<td>69.00</td>
<td>21.00</td>
<td>77.00</td>
<td>8.00</td>
<td>-8.00</td>
</tr>
<tr>
<td>4</td>
<td>22.00</td>
<td>88.00</td>
<td>19.00</td>
<td>84.00</td>
<td>7.00</td>
<td>4.00</td>
</tr>
<tr>
<td>5</td>
<td>21.00</td>
<td>105.00</td>
<td>17.00</td>
<td>90.50</td>
<td>6.50</td>
<td>14.50</td>
</tr>
<tr>
<td>6</td>
<td>19.75</td>
<td>118.50</td>
<td>13.50</td>
<td>96.75</td>
<td>6.25</td>
<td>21.75</td>
</tr>
<tr>
<td>7</td>
<td>18.50</td>
<td>129.50</td>
<td>11.00</td>
<td>102.75</td>
<td>6.00</td>
<td>26.75</td>
</tr>
<tr>
<td>8</td>
<td>17.25</td>
<td>138.00</td>
<td>8.50</td>
<td>108.50</td>
<td>5.75</td>
<td>29.50</td>
</tr>
<tr>
<td>9</td>
<td>16.00</td>
<td>144.00</td>
<td>6.00</td>
<td>114.75</td>
<td>6.25</td>
<td>29.25</td>
</tr>
<tr>
<td>10</td>
<td>14.75</td>
<td>147.50</td>
<td>3.50</td>
<td>121.25</td>
<td>6.50</td>
<td>26.25</td>
</tr>
<tr>
<td>11</td>
<td>13.50</td>
<td>148.50</td>
<td>1.00</td>
<td>128.00</td>
<td>6.75</td>
<td>20.50</td>
</tr>
<tr>
<td>12</td>
<td>12.25</td>
<td>147.00</td>
<td>($1.50)</td>
<td>135.00</td>
<td>7.00</td>
<td>12.00</td>
</tr>
<tr>
<td>13</td>
<td>11.00</td>
<td>143.00</td>
<td>($4.00)</td>
<td>142.25</td>
<td>7.25</td>
<td>0.75</td>
</tr>
</tbody>
</table>

   b. How many t-shirts per day will Bruce produce and sell? \( Q = 8 \)

   c. What price should Bruce charge? \( P = 17.25 \)

   d. What is Bruce’s profit? \( \text{Profit} = 29.50 \)
2. The table below presents the cost and revenue data for Dreher’s Designer Jeans Company, a monopolist.

a. Fill in Dreher’s total revenue, marginal revenue, and marginal cost schedules.

<table>
<thead>
<tr>
<th>Quantity Produced</th>
<th>Total Cost ($)</th>
<th>Marginal Cost</th>
<th>Quantity Demanded</th>
<th>Price ($/unit)</th>
<th>Total Revenue</th>
<th>Marginal Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>--</td>
<td>0</td>
<td>170</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>1</td>
<td>140</td>
<td>40</td>
<td>1</td>
<td>160</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td>2</td>
<td>184</td>
<td>44</td>
<td>2</td>
<td>150</td>
<td>300</td>
<td>140</td>
</tr>
<tr>
<td>3</td>
<td>230</td>
<td>46</td>
<td>3</td>
<td>140</td>
<td>420</td>
<td>120</td>
</tr>
<tr>
<td>4</td>
<td>280</td>
<td>50</td>
<td>4</td>
<td>130</td>
<td>520</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>335</td>
<td>55</td>
<td>5</td>
<td>120</td>
<td>600</td>
<td>80</td>
</tr>
<tr>
<td>6</td>
<td>395</td>
<td>60</td>
<td>6</td>
<td>110</td>
<td>660</td>
<td>60</td>
</tr>
<tr>
<td>7</td>
<td>475</td>
<td>80</td>
<td>7</td>
<td>100</td>
<td>700</td>
<td>40</td>
</tr>
<tr>
<td>8</td>
<td>565</td>
<td>90</td>
<td>8</td>
<td>90</td>
<td>720</td>
<td>20</td>
</tr>
</tbody>
</table>

b. How many jeans per day will Dreher produce and sell? Q = 6

c. What price should DDSC charge? P = $110

d. What is DDSC’s profit? Profit = $660 – 395 = 265

3. 

The graph shows the marginal cost and marginal revenue lines intersecting at point a, indicating the optimal quantity for production. The demand curve intersects with the marginal revenue curve at point g, showing the price at which the company should sell the product to maximize profit.
1. Refer to the figure above. The difference between marginal cost and marginal value for the last unit sold by the price searcher is equal to
   a. a-c.  
b. b-d.  
c. a-f.  
d. c-f.  

2. Refer to the figure above. Which of the following areas represents the deadweight loss due to monopoly pricing?
   a. Triangle bde  
b. Triangle bge  
c. Rectangle acdb  
d. Rectangle cfgd  

3. Refer to the figure above. Which area represents the total surplus lost due to monopoly pricing?
   a. Triangle bde.  
b. Triangle bge.  
c. Rectangle acdb.  
d. Rectangle cfgd.  

4.  

1. Refer to the figure above. To maximize total surplus, a benevolent social planner would choose which of the following outcomes?
   a. 100 units of output and a price of $10 per unit  
b. 150 units of output and a price of $10 per unit  
c. 150 units of output and a price of $15 per unit  
d. 200 units of output and a price of $10 per unit  

2. Refer to the figure above. To maximize its profit, a monopolist would choose which of the following outcomes?
a. 100 units of output and a price of $10 per unit
b. 100 units of output and a price of $20 per unit
c. 150 units of output and a price of $15 per unit
d. 200 units of output and a price of $20 per unit

3. **Refer to the figure above.** The monopolist's maximum profit
   a. is $800.
   b. is $1,000.
   c. is $1,250.
   d. cannot be determined from the diagram.

4. **Refer to the figure above.** The monopolist's maximum producer surplus
   a. is $800.
   b. is $1,000.
   c. is $1,250.
   d. cannot be determined from the diagram.

5. **Refer to the figure above.** The deadweight loss caused by a profit-maximizing monopoly amounts to
   a. $150.
   b. $200.
   c. $250.
   d. $300.

5.

1. In the diagram above, which area represents the deadweight loss from monopoly?
   a. E
   b. H
   c. C+D+E
   d. E+H
2. In the diagram above, which area represents the consumer surplus from monopoly?

a. A + B  
   b. A + B + C + D  
   c. C + D + E  
   d. F + G + H

3. In the diagram above, which area represents the price searcher’s producer surplus?

a. A + B  
   b. C + D + F + G  
   c. C + D + E + F + G + H  
   d. C + D + F

4. In the diagram above, the socially efficient level of output occurs where

a. marginal revenue equals marginal cost.  
   b. average revenue equals marginal cost.  
   c. marginal revenue equals average total cost.  
   d. average revenue equals average total cost.

6. Refer to the figure above. If the monopoly firm is NOT allowed to price discriminate, then consumer surplus amounts to

a. $0.  
   b. $500.  
   c. $1,000.  
   d. $2,000.

2. Refer to the figure above. If the monopoly firm perfectly price discriminates, then consumer surplus amounts to

a. $0.  
   b. $250.  
   c. $500.  
   d. $1,000.
3. Refer to the figure above. If the monopoly firm is NOT allowed to price discriminate, then the deadweight loss amounts to
   a. $50.
   b. $100.
   c. $500.
   d. $1,000.

4. Refer to the figure above. If the monopoly firm perfectly price discriminates, then the deadweight loss amounts to
   a. $0.
   b. $100.
   c. $200.
   d. $500.

5. Refer to the figure above. If there are no fixed costs of production, monopoly profit without price discrimination equals
   a. $500.
   b. $1,000.
   c. $2,000.
   d. $4,000.

6. Refer to the figure above. If there are no fixed costs of production, monopoly profit with perfect price discrimination equals
   a. $500.
   b. $1,000.
   c. $2,000.
   d. $4,000.

7. Refer to the figure above. If the price searcher uses second-degree price discrimination, by charging a discounted price of $20 for units beyond 200, then the deadweight loss amounts to
   a. $0.
   b. $200.
   c. $250.
   d. $500.

8. Refer to the figure above. If the price searcher uses second-degree price discrimination, by charging a discounted price of $20 for units beyond 200, then the consumer surplus amounts to
   a. $500.
   b. $1,000.
   c. $1,250.
   d. $1,500.

9. Refer to the figure above. If the price searcher uses second-degree price discrimination, by charging a discounted price of $20 for units beyond 200, then the producer surplus amounts to
   a. $1,500.
   b. $2,000.
   c. $2,250.
   d. $2,500.

One of my wise friends warned me of the worth and the limitations of mathematical doodling in economics. "The blackboard can be a very useful device," he said, "but do not confuse it with the real world."

Economic theory—and the curve bending and equation solving in which it is often exposited—is highly useful when used well. It helps to identify key variables and their functional interrelations in the problem at hand. It helps to turn general wonderment into coherent thought, to convert unstructured conjecture into consistent deduction, to provide systematic speculation amenable to real-world examination.

But not all possibly pregnant wonderment, conjecture and speculation can be readily reduced to neat, self-contained models. Not everything worth concern and consideration can be measured to the fourth decimal place. One need not denigrate formal rigor and manipulative elegance to note the need for imagination, erudition and wisdom. Esoteric technique cannot well substitute for sophisticated sense.

A model which serves well in its own proper province may require considerable adaptation for other proper questions and purposes. The economic theory of "perfect competition" is a case in point. It typifies much of economic thought of the past century. Many modern economists have worried much about how to make the most efficient use of resources now available to the community.

The theory of perfect competition tells us the conditions—conditions of costs and production, price and purchase—which must be satisfied in a market of many sellers and many buyers if efficiency is to be attained. But it is a theory of a particular kind of market in a context that is largely static, not to process and evolution over a substantial period of time.

A major economist of the twentieth century, Joseph Schumpeter, tried to push out the boundaries of our concern. The real world is one of change, and the life of the market is one of flux and adjustment stemming, in part, from innovations. Innovations may involve a new product, a new method of production, a new market, a new source of supplies, a new organization.

Being first—first in lowering cost, first in merchandising—establishes a degree of monopoly. Monopoly power tends to be quickly diluted. Still, progress calls for innovation, and the innovating entrepreneur is trying to get a monopolistic edge which generates profit. Some degree of seeming short-term inefficiency may be a necessary but tolerable cost of greater long-term productivity—although it is not convenient to incorporate such insightfulness into mechanical models.

Does this mean that Professor Schumpeter favored monopoly for its own sake? Does his picture of market activity wholly vitiate the competitive model? No. But short-term static efficiency is not everything. The competitive model, while answering some important questions, does not well explain the actual world dynamics of innovation.

Let the model fit the world.